



## Abstract

A reactive dye compound comprising:

- (a) at least one chromophore moiety;
- (b) at least one  $\text{SO}_2\text{C}_2\text{H}_4$  group which is attached to the chromophore moiety either directly via the sulphur atom of the  $\text{SO}_2\text{C}_2\text{H}_4$  group or via a linking group L;

characterised in that at least one  $\text{SO}_2\text{C}_2\text{H}_4$  group is substituted on its terminal carbon atom with at least one Y group wherein Y is derived from a hydrated aldehyde, a hydrated ketone, a hydrated alpha-hydroxy ketone or the hydrated form of formic acid, and linked via one of its oxygen atoms to the terminal carbon of the  $\text{SO}_2\text{C}_2\text{H}_4$  group thereby forming a hemiacetal. The compounds herein have high Exhaustion Values (E), high Fixation Values (F) and high Efficiency Values (T) and show significant improvements in terms of reducing spent dyestuff in effluent, increasing dye affinity to the substrate, increasing the dye-substrate covalent bonding, increasing the ability to dye substrates at room temperature, decreasing the amount of dye that is removed during the post dyeing "soaping off process" and therefore simplifying the post dyeing "soaping off process" traditionally associated with dyeing cotton with fibre reactive dyes and reduction of staining of adjacent white fabrics. In addition, the compounds prepared above provide more intense dyeings and require less levels of salt for dyeing cotton substrates.